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VIOLA PLANT NAMED 'SUNVIOKI'

BOTANICAL/COMMERCIAL CLASSIFICATION

Viola cornuta/Viola Plant

VARIETAL DENOMINATION

5 cv. 'Sunvioki'

BACKGROUND OF THE VARIETY

The genus of *Viola* is included in the family *Violaceae*, and has about 500 species of annuals, biennials, evergreen, and semi - evergreen and deciduous perennials found in varied
10 habitats in temperature regions worldwide.

Each flower has 5 petals: a spurred lower petal, 2 lateral petals and 2 upward-facing upper petals.

Many cultivars within the genus are informally referred to as garden pansies. *Violas* are all derived from the
15 complex hybridization of *V.tricolour*, *V.lutea*, *V.cornuta*, and other species.

Viola cornuta has played an important role in the development of garden violas and violettas as a result of cross breeding with the garden pansy, *V. wittorockiana*.

20 *Viola cornuta* is stem prostrate. Leaves are narrow to broad ovate, base cordate to truncate, margin deeply segmented.

The female parent used in the crossing for obtaining 'SUNVIOKI' was '9V-39a' (not patented in the United States

25 The pollen parent used in the crossing for obtaining of 'SUNVIOKI' is a commercial cultivar, 'Alpine Sun'.

BREEDING PROCESS

Crossing between '9V-39a' as female parent and 'Alpine Sun' as male parent was conducted in Shiga-ken, Japan, in
30 April 2000. In May, seeds were obtained from the crossing. In August, three seedlings were selected in view of having highly spreading habit with yellow petals , and were

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propagated by cutting. A trial was carried out for those seedlings by flower potting and bedding from October 2001. One variety was selected in view of having long blooming time. The botanical characteristics of that plant were then
5 examined, using similar varieties 'Alpine Spring' and 'Violetto Lune' for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. The new variety of *Viola*
10 *cornuta* plant was named 'SUNVIOKI'.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOKI', was asexually reproduced by tissue culture and the homogeneity and stability thereof were confirmed. The new variety reproduces true to type in successive generations of
15 asexual reproduction.

Viola cornuta plants, '9V-39a' and 'Alpine Sun' are presently maintained at Shiga-ken, Japan.

DESCRIPTION

In the following description, the color-coding is in
20 accordance with the Horticultural Colour Chart of The Royal Horticultural Society, London, England (R.H.S.).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOKI' are as follows.

Plant:

25 Stemmed or non-stemmed - Stemmed
 Growth habit - Spreading
 Height - Approximately 9 cm
 Plant cover - Approximately 49 cm

Stem:

30 Length - Approximately 36 cm
 Branching - Much
 Pubescence - Present

Leaf:

 Overall form - Long oblong

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Apex form - Acute

Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

5 Length - Approximately 1.9 cm

Width - Approximately 1.2 cm

Color of upper surface - Grayish olive green (near R.H.S.
137A)

10 Color of under surface - Moderate yellow green (near
R.H.S. 137C)

Variegation - Absent

Leaf luster - Lustrous

Vein - Distinct

Petiole length - Approximately 1.4 cm

15 Stipule length - Approximately 1.8 cm

Flower:

Peduncle length - Approximately 7.5 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (near R.H.S. 144B)

20 Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.2 cm

Horizontal diameter - Approximately 3.0 cm

Ruffle of petal margin - Weakly ruffled

25 Petal curving - Very weak

Petal number - Single

Flower color - Single-colored

Upper petal

Form - Round

30 Size - Approximately 1.6×1.6 cm

Petal color - Single-colored

Ground color - Pale yellow green (near R.H.S. 157A)

Blotch - Absent

Side petal

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- Form - Ovate
Size - Approximately 1.3×1.5 cm
Petal color - Single-colored
Ground color - Pale yellow green (near R.H.S. 157A)
5 Blotch - Absent
- Lower petal
Form - Cordate
Size - Approximately 1.9×1.9 cm
Petal color - Single-colored
10 Ground color - Pale yellow green (near R.H.S. 157A)
Blotch - Absent
Eye color - Vivid reddish yellow (near R.H.S. 14A)
Eye size - Medium
Thickness of petal - Medium
15 Spur length - Longer than the sepal appendage
Sepal - Short
Number of flowers - Many
- Seed:
Color - Deep brown
- 20 Physical property:
Flowering time - Late
Fragrance - Faint or weak
Resistance
Rain - Strong
25 Cold - Strong
Heat - Medium
Disease - Strong
Pest - Strong
- The botanical characteristics of the male parent plant
30 'Alpine Sun' used in the crossing of 'SUNVIOKI' are as follows.
- Plant:
Stemmed or non-stemmed - Stemmed
Growth habit - Spreading

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Height - Approximately 8 cm

Plant cover - Approximately 35 cm

Stem:

Length - Approximately 25 cm

5 Branching - Much

Pubescence - Present

Leaf:

Overall form - Long oblong

Apex form - Obtuse

10 Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

Length - Approximately 2.1 cm

Width - Approximately 1.0 cm

15 Color of upper surface - Grayish olive green (near R.H.S.
137A)

Color of under surface - Moderate yellow green (near
R.H.S. 137C)

Variegation - Absent

20 Leaf luster - Matte

Vein - Apparent

Petiole length - Approximately 2.2 cm

Stipule length - Approximately 2.1 cm

Flower:

25 Peduncle length - Approximately 8.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

30 Longitudinal diameter - Approximately 3.3 cm

Horizontal diameter - Approximately 2.5 cm

Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

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Flower color - Single-colored

Upper petal

Form - Round

Size - Approximately 1.1x1.0 cm

5 Petal color - Self-colored

Ground color - Vivid yellow (near R.H.S. 9B)

Blotch - Absent

Side petal

Form - Ovate

10 Size - Approximately 1.2x1.0 cm

Petal color - Single-colored

Ground color - Vivid yellow (near R.H.S. 9B)

Blotch - Absent

Lower petal

15 Form - Cordate

Size - Approximately 1.4x1.3 cm

Petal color - Single-colored

Ground color - Vivid yellow (near R.H.S. 9A)

Blotch - Absent

20 Eye color - Vivid yellow (near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

25 Number of flowers - Many

Seed:

Color - Deep brown

Physical property;

Flowering time - Late

30 Fragrance - Absent

Resistance

Rain - Medium

Cold - Strong

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Heat - Medium

Disease - Strong

Pest - Strong

The botanical characteristics of the similar variety
5 'Alpine Spring' used for examination as a comparison are as
follows.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

10 Height - Approximately 8 cm

Plant cover - Approximately 35 cm

Stem:

Length - Approximately 25 cm

Branching - Much

15 Pubescence - Present

Leaf:

Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

20 Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

Length - Approximately 2.1 cm

Width - Approximately 1.0 cm

25 Color of upper surface - Grayish olive green (near R.H.S.
137A)

Color of under surface - Moderate yellow green (near
R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

30 Vein - Apparent

Petiole length - Approximately 2.2 cm

Stipule length - Approximately 2.1 cm

Flower:

Peduncle length - Approximately 8.0 cm

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- Peduncle thickness - Thin
Peduncle color - Strong yellow green (near R.H.S. 144B)
Flower form - Vertically oblong
Flowering direction - Upward
- 5 Longitudinal diameter - Approximately 3.3 cm
Horizontal diameter - Approximately 2.5 cm
Ruffle of petal margin - Flat
Petal curving - Weak
Petal number - Single
- 10 Flower color - Single-colored
Upper petal
 Form - Round
 Size - Approximately 1.1×1.0 cm
 Petal color - Single-colored
- 15 Ground color - Brilliant yellow green (near R.H.S.
2B)
 Blotch - Absent
- Side petal
 Form - Ovate
- 20 Size - Approximately 1.2×1.0 cm
Petal color - Single-colored
Ground color - Vivid yellow (near R.H.S. 9B)
Blotch - Absent
Vein color - Dark reddish purple (near R.H.S. 79A)
- 25 Lower petal
 Form - Cordate
 Size - Approximately 1.4×1.3 cm
 Petal color - Single-colored
 Ground color - Vivid yellow (near R.H.S. 9A)
- 30 Blotch - Absent
Vein color - Dark reddish purple (near R.H.S. 79A)
Eye color - Vivid yellow (near R.H.S. 13A)
Eye size - Small

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Thickness of petal - Thin
Spur length - Longer than the sepal appendage
Sepal - Short
Number of flowers - Many

5 Seed:

Color - Deep brown

Physical property:

Flowering time - Late

Fragrance - Absent

10 Resistance

Rain - Medium

Cold - Strong

Heat - Medium

Disease - Strong

15 Pest - Strong

The botanical characteristics of the similar variety
'Violetto Lune' used for examination as a comparison are as
follows.

Plant:

20 Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 6 cm

Plant cover - Approximately 40 cm

Stem:

25 Length - Approximately 26 cm

Branching - Much

Pubescence - Present

Leaf:

Overall form - Long oblong

30 Apex form - Obtuse

Base form - Obtuse

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

Length - Approximately 2.2 cm

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Width - Approximately 1.6 cm

Color of upper surface - Grayish olive green (near R.H.S.
137B)

Color of under surface - Moderate yellow green (near
R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

Petiole length - Approximately 1.3 cm

Stipule length - Approximately 2.0 cm

Flower:

Peduncle length - Approximately 9.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Horizontal

Longitudinal diameter - Approximately 3.4 cm

Horizontal diameter - Approximately 2.9 cm

Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

Flower color - Single-colored

Upper petal

Form - Round

Size - Approximately 1.9×1.9 cm

Petal color - Single-colored

Ground color - Vivid yellow (near R.H.S. 9A)

Blotch - Absent

Side petal

Form - Round

Size - Approximately 1.2×1.1 cm

Petal color - Single-colored

Ground color - Vivid yellow (near R.H.S. 9A)

Blotch - Absent

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Lower petal

Form - Cordate

Size - Approximately 1.8x1.1 cm

Petal color - Single-colored

5 Ground color - Vivid yellow (near R.H.S. 12A)

Blotch - Absent

Eye color - Vivid yellow (near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

10 Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

Seed:

Color - Deep brown

15 Physical property:

Flowering time - Late

Fragrance - Absent

Resistance

Rain - Medium

20 Cold - Strong

Heat - Medium

Disease - Strong

Pest - Strong

SUMMARY OF THE NEW VARIETY

25 The new variety of viola plant named 'SUNVIOKI', which is a vegetative propagated variety, has a spreading plant habit with very long epigeal stem. The plant height is low and the branching is abundant. The flowers of the new variety are vertically oblonged and very small, and the color of flower is
30 brilliant greenish yellow with vivid yellow eye. The new variety has a high resistance to cold, pests and diseases.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a photograph giving a partial view of the new

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variety of *Viola cornuta* plant 'SUNVIOKI' planted in pots.

FIG. 2 is a photograph of flowers of the new variety of *Viola cornuta* plant 'SUNVIOKI'.

DESCRIPTION OF THE VARIETY

5 The botanical characteristics of this new and distinct variety of *Viola cornuta* plant named 'SUNVIOKI' are as follows. The plant was observed at Yokaich-shi, Shiga-ken, Japan. The plant was approximately seven months old and was grown in a 30 cm diameter container.

10 Plant:

 Stemmed or non-stemmed - Stemmed

 Growth habit - Spreading

 Height - Approximately 8 cm

 Plant cover - Approximately 75 cm

15 Stem:

 Length - Approximately 45 cm

 Branching - abundant

 Pubescence - Present

 Internode length - Approximately 1.8 cm

20 Leaf:

 Overall form - Long oblong

 Apex form - Obtuse

 Base form - Acute

25 Serrated, lobed or not - Serrated or lobed

 Margin - Serrated or slightly lobed

 Length - Approximately 3.5 cm

 Width - Approximately 1.7 cm

 Color of upper surface - Grayish olive green (R.H.S.
30 137A)

 Color of under surface - Moderate yellow green (R.H.S.
 137C)

 Variegation - Absent

 Leaf luster - Matte

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Vein - Apparent

Leaf venation color - Near R.H.S. 144A

Petiole length - Approximately 2.5 cm

Leaf petiole diameter - Approximately 0.2 cm

5 Leaf petiole color - Near R.H.S. 143C

Stipule length - Approximately 1.5 cm

Stipule shape (type) - Narrowly ovate pinnately parted

Stipule width - Approximately 0.6 to 0.8 cm.

Stipule color

10 Upper side surface - Near R.H.S. 146B

Underside surface - Near R.H.S. 146C

Flower:

Bud

Shape - Lenticular

15 Length - Approximately 1.0 - 1.5 cm.

Diameter - Approximately 0.2 to 0.4 cm.

Color - Near R.H.S. 2B

Peduncle length - Approximately 10.0 cm

Peduncle diameter - Approximately 0.1 cm.

20 Peduncle color - Strong yellow green (near R.H.S. 144A)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.5 cm

Horizontal diameter - Approximately 2.6 cm

25 Flower depth - Approximately 0.9 cm.

Ruffle of petal margin - Weakly ruffled

Petal curving - Weak

Number of petals per flower - Five (two upper petals,
two side petals and one lower petal)

30 Flower color - Single-colored

Upper petal

Size - Approximately 1.8×1.3 cm

Shape - Obovate

Apex shape - Rounded

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Base shape - Truncate

Margin - Entire

Upper surface color - Near R.H.S. 5B, underside

surface color - Near R.H.S. 3B

5 Blotch - Absent

Side petal

Size - Approximately 1.3×1.1 cm

Side petal shape - Obovate

Apex shape - Rounded

10 Base shape - Attenuate

Margin - Entire

Upper surface color - Near R.H.S. 5A; Underside

surface color - Near R.H.S. 3B

Blotch - Absent

15 Lower petal

Size - Approximately 1.7×1.8 cm

Shape - Cordate

Apex shape - Emarginate

Base shape - Cuneate

20 Margin - Entire

Upper surface color - Near R.H.S. 5A; Underside

surface color - Near R.H.S. 3B

Blotch - Absent

Eye color - Vivid yellow (Near R.H.S. 13A)

25 Eye size - Small

Thickness of petal - Thin

Spur

Length - Approximately 0.6 to 0.8 cm

Diameter - Approximately 0.2 cm

30 Color - Near R.H.S. 157A

Sepal

Number - 5

Shape - Narrowly triangular

Length - Approximately 1.8 cm

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Width - Approximately 0.3 cm

Upper surface color - Near R.H.S. 146C

Underside surface color - Near R.H.S. 145B

Number of flowers - Approximately 120 flowers present on
a plant at one time

Pedicel - None

Seed:

Color - Deep brown, near R.H.S. 165B

Seed number - Approximately 10 per capsule

Seed shape - Ellipsoidal

Physical property:

Flowering time - From early November to June in Japan,
except for Hokkaido

Time to produce - Approximately four months

Lastingness of an individual bloom on the plant -
Approximately 5 to 7 days

Fragrance - Faint or weak

Resistance to rain - Medium

Winter hardiness - This variety has survived at a
temperature of at least minus 7°C

Resistance to Heat - Medium

Disease and pests - No serious damage by white fly,
aphids, and bacterial disease has been observed

This new variety of *Viola cornuta* plant 'SUNVIOKI' is
most suitable for flower bedding and potting, hanging baskets
and ground cover.

COMPARISON WITH SIMILAR VARIETY

The new variety of *Viola cornuta* plant 'SUNVIOKI' is
different from a similar variety, 'Alpine Spring' in following
points,

1. The plant width of 'SUNVIOKI' is wider than that of
'Alpine Spring'.

2. 'SUNVIOKI' has abundant branching compared to
'Alpine Spring' which has less branching.

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3. The ruffle of petal margin of 'SUNVIOKI' is weakly ruffled while that of 'Alpine Spring' is flat.

4. 'SUNVIOKI' has single-colored flower while 'Alpine Spring' has multi-colored one.

5 5. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Alpine Spring' is R.H.S.2B.

6. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9B with R.H.S.79A vein.

10 7. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9A with R.H.S.79A vein.

8. The flowering time of 'SUNVIOKI' is early while that of 'Alpine Spring' is late.

15 The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Lune' in following points,

1. 'SUNVIOKI' has abundant branching compared to 'Violetto Lune' which has less branching.

2. The leaf color of upper surface of 'SUNVIOKI' is R.H.S.137A while that of 'Violetto Lune' is R.H.S.137B.

20 3. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Violetto Lune' is R.H.S.9A.

4. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.9A.

25 5. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.12A.

6. The flowering time of 'SUNVIOKI' is early while that of 'Violetto Lune' is late.